



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,497	12/10/2003	Kazunori Shimazaki	5000-5135	9233
27123	7590	11/03/2005		EXAMINER
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101				WEISKOPF, MARIE
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/733,497	SHIMAZAKI ET AL.	
	<b>Examiner</b> Marie A. Weiskopf	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 10 December 2003.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6 and 8-15 is/are rejected.
- 7) Claim(s) 7 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 December 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/10/2003</u> .	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

1. Claims 1-15 have been examined.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-6, and 8-14 are rejected under 35 U.S.C. 102(a) as being anticipated by Tanaka et al (US 6,950,035.) Tanaka et al discloses a parking assist system with image obtaining means and displaying means, comprising:

- In regard to claim 1, an image capturing means for capturing at least an image behind the vehicle, a monitor arranged near a driver seat of the vehicle for displaying the image obtained by the image capturing means, a yaw angle detecting means for outputting the guidance regarding the driving operations to the driver and a controller. (Column 2, lines 56-65)

- In regard to claim 2, the controller calculates at least one of the predicted path and the predicted parking position of the vehicle to display it on the monitor when the driver operates the vehicle in accordance with the guidance information. (Column 4, lines 42-46, lines 54-56)
- In regard to claim 3, the controller displays at least one of the predicted path and the predicted parking position of the vehicle, both being set in advance, when the driver operates the vehicle in accordance to the guidance information. (Column 4, lines 42-46, lines 54-56)
- In regard to claim 5, a predicted parking position display moving means for moving a display of the predicted parking position to the target parking space in the image obtained by the image capturing means on the screen of the monitor, through an operation conducted by the driver and the controller updates the prescribed yaw angle based upon a movement amount of the display of the predicted parking position means and compares the updated prescribed yaw angle with the yaw angle detected by the yaw angle detecting means to identify the current position of the vehicle and to provide the guidance information for parking assistance. (See Figure 6)
- In regard to claim 8, the controller displays at least one of the predicted path and the predicted parking position on the monitor so as to overlap with the image obtained by the image capturing means from a time when parking assistance using the guidance information is started. (Column 4, lines 6-9)

Art Unit: 3661

- In regard to claim 9, the controller displays at least one of the predicted parking position on the monitor so as to overlap with the image obtained by the image capturing means from a time when the vehicle advances while maintaining a predetermined steering angle to reach a position where a reverse movement is started after parking assistance is started. (Column 4, lines 6-9)
- In regard to claim 10, the controller displays at least one of the predicted path and parking position on the monitor so as to overlap with the image obtained from the camera, and the vehicle is stopped based on the degree of overlapping of at least one of the displayed predicted path and the target parking position in the image. The operator would not continue to operate the vehicle when the predicted parking spot and the target parking spot are overlapping, because this would mean that the vehicle is correctly in the parking space.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 6, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 6,950,035) in view of Takagi et al (US 2003/0080877.) Takagi et al discloses a device for monitoring an area around a vehicle.

- In regard to claim 4, Tanaka et al fails to disclose a controller gradually moving the display of at least one of the predicted path and the predicted parking position on the monitor such that the display is always at the same position with respect to the image obtained by the image capturing means in accordance with vehicle movement. Takagi et al shows the predicted path moving with respect to the image obtained by the camera. (See figures 8A-10B)
- In regard to claim 6, Tanaka et al fails to disclose a movement amount storing means for storing the movement amount of the display of the predicted parking position which is moved by the predicted parking position moving means, and the controller displaying at least one of the predicted path and the parking position based on the stored movement amount. Takagi et al, as discussed previously, shows the predicted path moving with respect to the image obtained by the camera. Therefore, Takagi inherently has a way to store the movement amount of the display in order to be able to tell how the predicted path needs to be changed in regard to the image obtained by the camera.
- In regard to claims 11-13, Tanaka et al fails to disclose the controller providing the guidance information for parking the vehicle by advancing the vehicle from the position where the parking assistance is started while maintaining a predetermined steering angle, providing guidance information for parking the vehicle by driving the vehicle backward from the position where the parking assistance is started while maintaining a predetermined steering angle, and providing the guidance information for parking the vehicle by advancing the

vehicle while maintaining a predetermined steering angle to reach a position where a reverse movement is started. Takagi et al discusses calculating the turning radius R and the maximum allowed steering angle  $\theta$ . (Page 4, paragraph 49) Takagi et al also discusses providing the projected path of travel for either parallel parking or backward parking into a spot.

- In regard to claim 14, Tanaka et al fails to discuss the controller calculating at least one of the predicted path and the predicted parking position in the case where parking operations are conducted after parking assistance in accordance with the guidance information is started and before the vehicle reaches a position where a reverse movement is started. Takagi et al discusses comparing the calculated guide path with the state that the vehicle is currently in. (Page 3, paragraph 42)
- In regard to claim 15, Tanaka et al fails to discuss a side image capturing means, however, Takagi et al does include a side image capturing means. (See Figure 1)

It would have been obvious to one having ordinary skill in the art at the time of the invention to include the additions from Takagi et al to the Tanaka et al invention in order to provide a system which is fully integrated to help a user park in a variety of areas. Having a side image capturing means allows the user to be able to see fully around the vehicle when attempting to park. Calculating a steering angle for the guidance of the operator allows the user to quickly be able to park correctly in position. Also, changing

the predicted path along with the image obtained from the camera allows the user to continually be able to see where they need to go clearly as they move.

***Allowable Subject Matter***

7. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

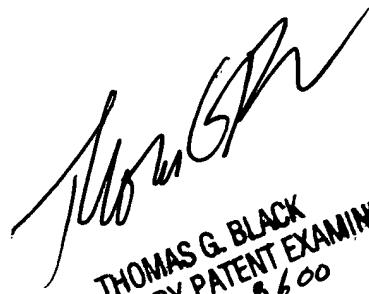
- US 6,704,653 to Kuriya et al discloses a vehicle backing support apparatus.
- US 6,593,960 to Sugimoto et al discloses a multi-functional on-vehicle camera system and image display method for the same.
- US 6,563,363 to Okuda discloses a back monitoring apparatus for a vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie A. Weiskopf whose telephone number is (571) 272-6288. The examiner can normally be reached on Monday-Thursday between 7:00 AM and 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

\*\*\*



THOMAS G. BLACK  
SUPERVISORY PATENT EXAMINER  
GROUP 3600